

Abstract of the Disclosure

Provided is a method of manufacturing a semiconductor device. The method includes (a) sequentially stacking a first semiconductor layer, a mask layer, and a metal layer on a substrate; (b) anodizing the metal layer to change the metal layer into a metal oxide layer including a plurality of nanoholes; (c) etching the mask layer using the metal oxide layer as an etch mask until the nanoholes are extended to the surface of the first semiconductor layer; (d) removing the metal oxide layer; and (e) depositing a second semiconductor layer on the mask layer and the first semiconductor layer. The present invention reduces defect density and promotes a uniform defect distribution.